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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/597,126

07/12/2006

Joachim Sachs

P18698-US1

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27045

7590

01/06/2009

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EXAMINER

ANWAR, MOHAMMAD S

ART UNIT

PAPER NUMBER

2416

MAIL DATE

DELIVERY MODE

01/06/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/597,126	<b>Applicant(s)</b> SACHS ET AL.	
	<b>Examiner</b> MOHAMMAD ANWAR	<b>Art Unit</b> 2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 7/12/06.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-15 and 17-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-15,17-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 July 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because Figures 3-5 shows blocks and circles with no description or legends. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

2. Claim 15 is objected to because of the following informalities:

In claim 15 line 3 recites “a pre-determined information” which seems to refer to “a pre-determined information” in claim 14 line 7. If this is true, it is suggested to change

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"a pre-determined information" to ---the pre-determined information---. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3 and 14-15 are rejected under 35 U.S.C. 102(b) as being unpatentable by Kawakami et al. (U.S. PGPub. No. 2002/0136163).

**For claims 1 and 14**, Kawakami et al. disclose a method of controlling a queue buffer arranged to queue data units received over a communication network (see paragraph 33 lines 5-9), comprising: invoking a congestion notification procedure under a predetermined condition (see paragraph 78 lines 1-3 which explains that the congestion notification is sent to devices which are judged based on pre-determined conditions), wherein said congestion notification procedure comprises determining whether one or more of said queued data units contains a predetermined information (see paragraph 80 lines 1-6, the congestion is judge on the predetermined conditions of each terminal), performing a congestion notification with respect to one or more queued data units if no queued data units contain said predetermined information (see paragraph 78 lines 1-3), and preventing a performance of a congestion notification at least with respect to said queued data units containing said predetermined information and belonging to a same flow as said queued data units (see paragraph 24 lines 1-5

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which explains the notification message is sent to specific terminal where the problem occurs and thus preventing the message to be sent out to other devices).

**For claim 2**, Kawakami et al. disclose wherein said performing of said congestion notification with respect to a given data unit comprises one of dropping said given data unit and marking said given data unit with a congestion notifier (see Figure 19 where the terminals are marked for congestion notifier based on their buffer status).

**For claims 3 and 15**, Kawakami et al. disclose wherein if one or more queued data units contain said predetermined information, performance of congestion notification with respect to any queued data units is prevented (see Figure 1A and Table 4A which shows individual congestion notification message is sent and all the other terminals operate normal without getting congestion notification message).

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
4. Claims 5, 7-9, 13, 17, 19-21 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami et al. in view of Lym et al. (U.S. PGPub. No. 2004/0093453).

**For claims 5 and 17**, Kawakami et al. disclose determining whether a flow of data units is: application limited, coming to an end or one or more data units of the flow of data units fulfills a congestion notification prevention condition (see paragraph 88 lines 4-7 which shows that the congestion condition with respect to buffer is judged for each port prior to issuing a congestion notification message to the specific port), and if the flow of data units is application limited, the flow is ending or said one or more data units of said flow fulfills said congestion notification prevention condition (see paragraph 97 lines 8-18 which explains a process of generating a congestion notification based on utilization of individual port; see Figure 18, paragraph 194 lines 1-14 which calculates

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the transfer flow amount and based on this amount, it can be determined if the flow is coming to an end), setting predetermined congestion notification prevention information in at least said one or more data units of said flow (see paragraph 99 which shows how the configuration of the congestion status how it is generated based on utilization and buffer level). Kawakami disclose all the subject matter but fails to mention application limited data flow. . However, Lym et al. disclose wherein said congestion notification prevention condition comprises an indication that the flow of data units is application limited (see paragraph 120 lines 1-10 and paragraph 121 lines 1-4). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Lym et al. application limited flow scheme into Kawakami et al. flow control scheme. The method can be implemented in the memory. The motivation of doing this is to ensure uninterrupted flow of data (see paragraph 24 lines 17-20).

**For claims 7 and 19**, Kawakami et al. disclose wherein said congestion notification prevention condition comprises an indication that the flow of data units is coming to an end (see Figure 18, paragraph 194 lines 1-14 which calculates the transfer flow amount and based on this amount, it can be determined if the flow is coming to an end).

**For claims 8 and 20**, Kawakami et al. and disclose all the subject matter but fails to mention wherein said congestion notification prevention condition comprises an indication that the flow of data units is application limited. However, Lym et al. disclose wherein said congestion notification prevention condition comprises an indication that the flow of data units is application limited (see paragraph 120 lines 1-10 and paragraph

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121 lines 1-4). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Lym et al. application limited flow scheme into Kawakami et al. flow control scheme. The method can be implemented in the memory. The motivation of doing this is to ensure uninterrupted flow of data (see paragraph 24 lines 17-20).

**For claims 9 and 21**, Kawakami et al. disclose wherein said congestion notification prevention condition comprises an indication that said one or more data units of said flow carry predetermined signaling identifiers (see Figure 19, congestion status table with rate status indicator which indicates where to send the congestion notification message).

**For claims 13 and 25**, Kawakami et al. disclose wherein said predetermined congestion notification prevention information is a data unit count-down value that counts down the number of data units remaining in the flow (see Figure 18; paragraph 194 lines 1-14 where the transfer flow is measured based on the rate count down).

5. Claims 6, 12, 18 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami et al. in view of Lym et al. as applied to claims 5 and 17 above, and further in view of Thoo et al. (E.P. No. 0,955,749 A1).

**For claims 6 and 18**, Kawakami et al. and Lym et al. disclose all the subject matter but fails to mention wherein said step of determining whether a congestion notification prevention condition is fulfilled comprises the analyzing of higher layer information. However, Thoo et al. from a similar field of endeavor disclose wherein said



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step of determining whether a congestion notification prevention condition is fulfilled comprises the analyzing of higher layer information (see paragraph 78 lines 1-20).

Thus, it would have been obvious to one ordinary skill in the art at the time of an invention was made to include Thoo et al. analyzing scheme into Kawakami et al. and Lym et al. flow control scheme. The method can be implemented in a router or terminal. The motivation of doing this is to control flow control accurately and achieve high throughput and less congestion (see paragraph 12 lines 1-4).

**For claims 12 and 24**, Kawakami et al. and Lym et al. disclose all the subject matter but fails to mention wherein said predetermined congestion notification prevention information is a single bit. However, Thoo et al. from a similar field of endeavor disclose wherein said predetermined congestion notification prevention information is a single bit (see paragraph 32 lines 1-5). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Thoo et al. bit scheme into Kawakami et al. and Lym et al. flow control scheme. The method can be implemented in a packet header. The motivation of doing this is to reduce bandwidth used by sending such indications, which would otherwise contribute to the congestion (see paragraph 23 lines 1-3).

6. Claims 10-11 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami et al. in view of Lym et al. as applied to claims 5 and 17 above, and further in view of Brothers et al. (U.S. Patent No. 6,822,955).

**For claims 10 and 22**, Kawakami et al. and Lym et al. disclose all the subject matter but fails to mention wherein said data unit sender is part of a proxy server. However, Brothers et al. from a similar field of endeavor disclose wherein said data unit sender is part of a proxy server (see Figure 1 (20)). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Brothers et al. proxy server scheme into Kawakami et al. and Lym et al. congestion control scheme. The method can be implemented in a server or a router or a switch. The motivation of doing this is to use proxy server to establish communication between a device in a first network and a destination device having an arbitrary address on a second network outside of the first network. The method includes the step of generating an address resolution protocol packet to identify the arbitrary address of the destination device (see column 2 lines 5-11).

**For claim 11 and 23**, Kawakami et al. and Lym et al. disclose all the subject matter but fails to mention wherein said proxy server is connected to a mobile communication network and arranged for receiving data units from a sending end point outside of said mobile communication network and relaying said data units to a receiving end point connected to said mobile communication network. However, Brothers et al. from a similar field of endeavor disclose wherein said proxy server is connected to a mobile communication network and arranged for receiving data units from a sending end point outside of said mobile communication network and relaying said data units to a receiving end point connected to said mobile communication network (see column 3 lines 52-65). Thus, it would have been obvious to one ordinary

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skill in the art at the time of invention was made to include Brothers et al. proxy server scheme into Kawakami et al. and Lym et al. flow control scheme. The method can be implemented in a server or router. The motivation of doing this is to use proxy server to establish communication between a device in a first network and a destination device having an arbitrary address on a second network outside of the first network. The method includes the step of generating an address resolution protocol packet to identify the arbitrary address of the destination device (see column 2 lines 5-11).

### ***Conclusion***

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Schliwa-Bertling et al. (U.S.PGPub. No. 2007/0286070 anticipates queue buffer) and Jain et al. (U.S. Patent No. 5,633,859 anticipates congestion management).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MOHAMMAD ANWAR whose telephone number is (571)270-5641. The examiner can normally be reached on Monday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derrick W. Ferris can be reached on 571-272-3123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MOHAMMAD ANWAR  
Examiner  
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